$\therefore \frac{m}{n}A_p + pA_p + (p+1)A_{p+1} = (\frac{m}{n}+p)A_p + (p+1)A_{p+1} = 0;$

and $A_{p+1} = -\dfrac{\frac{m}{n}+p}{p+1}.A_p$. Put $p=0, 1, 2$, &c., then $A_1 = -\dfrac{m}{n}$, $A_2 =$

$$-\frac{\frac{m}{n}+1}{2}.A_1 = \frac{\frac{m}{n}\left(\frac{m}{n}+1\right)}{1.2},\ A_3 = -\frac{\frac{m}{u}\left(\frac{m}{n}+1\right)\left(\frac{m}{n}+2\right)}{1\,.\,2\,.\,3},\ \text{\&c.}$$

This demonstration is just as easy as that for positive fractional exponents.

NOTE.—F. W. D. Holbrook, Wakefield, Mass., writes—"Would it be asking too much to request of some of your contributors the equation of a right solid the base of which is an ellipse and the surface of which is generated by a straight line generatrix, moving on the perimeter of the ellipse and also on a straight line parallel to and symmetrical with said ellipse—The solid would be called I presume a conical wedge. The fact is that sections of the solid parallel to its elliptical base are concentric with the ellipse but still are not ellipses.

Or, in other words, can I obtain a demonstration that no two ellipses can be parallel? This inquiry grew out of the designing of a bridge pier of elliptical base where it became necessary to draw diagrams of every course with the size and position of the stone to be used marked thereon.

If the altitude of this wedge were infinite I suppose the base would approach indefinitely near to a circle"

GEOMETRICAL PROBLEM AND SOLUTION.

BY ISAAC H. TURRELL, CUMMINSVILLE, OHIO.

Problem.—A given circle S, touches a straight line at T, and a series of circles Y, Y_1 &c. are drawn tangent to each other consecutively and also touching S and its tangent; then if the ratio of any one of the series as Y to S be represented by a^2, the ratio of Y_n to S will be $(\sqrt{a} \pm n)^4$ according as Y_n is nearer to, or farther from T than Y is. (The positive sign may be regarded as showing the standard case).

As a particular example, if any one of the series becomes equal to S, the square roots of their radii are inversely as the natural numbers 1, 2, 3, 4, &c.